BOARD OF INSPECTION AND SURVEY

ISIC PREPARATION AND EXECUTION SEMINAR FOR INSURV MATERIAL

OVERVIEW

- BOARD OF INSPECTION AND SURVEY
  - History
  - Mission
  - Organization
- THE INSPECTION
  - Process
  - Preparation
  - Products
- INSURV DEPARTMENT SPECIFICS

INSURV HISTORY

1868 - Board of Naval Officers was established under Admiral Farragut to report on the condition of Naval Vessels

CURRENT LEGAL AUTHORITY

U.S. Code, Title 10

Section 7304. Examination by Board . . .

(a) The Secretary of the Navy shall designate Boards of Naval Officers to examine Naval vessels… Each vessel shall be examined at least once every three years, if practicable.

(b) A Board designated under subsection (a) shall submit to the Secretary in writing its recommendations as to which vessels, if any, among those it examined should be stricken from the Naval Vessel Register.

INSPECTION TEAM

- **COMMISSIONED OFFICERS**
  - **CWO TO CAPTAIN**
  - **URL, RL, STAFF CORPS, LDO, CWO**
  - **FFG APPROX 15**
  - **CV APPROX 50**
- **TECHNICAL ASSISTANTS**
  - **CIVIL SERVANTS GS-4 TO GS-15**
  - **TECHNICIANS/ENGINEERS**
  - **FROM TECHNICAL CMDS (NAVSEA, NAVAIR, FTSC)**
  - **FFG APPROX 15**
  - **CV APPROX 50**

THE INSPECTION

- Focused on Material Condition
  - –Attributes of Material Readiness directly impact Material Condition
    - **Training, Supply, Personnel, Capacity/Capability**
- Two Distinct Phases
  - –Preparation and Execution
- References for all Standards/Demos
- Equipment Must Perform to Specs

THE INSPECTION (con't)

- **CRITERIA FOR PART 1 DEFICIENCIES**
  - **MAKES SHIP UNSEAWORTHY.**
  - **SERIOUSLY DEGRADES A MISSION AREA OR REQUIRED OPERATIONAL CAPABILITY (ROC).**
  - **SERIOUSLY DEGRADES THE EFFICIENCY OF EQUIPMENT OR CREW.**
  - **GENUINE LIKELIHOOD THAT SERIOUS DAMAGE TO EQUIPMENT OR SERIOUS INJURY OR DEATH WILL OCCUR. (UNSAFE TO OPERATE)**
- **SNAPSHOT IN TIME TO RECORD "AS FOUND" CONDITIONS**

THE INSPECTION (con't)

- **OPERATION OF SYSTEMS/EQUIPMENT WILL NOT BE OBSERVED WITHOUT THE PROPER DOCUMENTATION ON STATION AND BEING USED (I.E. PMS, EOSS, TECH MANUAL, ETC). SAFETY IS PARAMOUNT(ORM).**
- **DON'T ASSUME THAT BECAUSE AN INSPECTOR DOES NOT NOTE AN ABNORMALITY WITH A SYSTEM OR EQUIPMENT THAT THE CONDITION IS OK. IF YOU OBSERVE A CONDITION THAT IS NOT CORRECT AND ACTION IS REQUIRED, TAKE THE REQUIRED ACTION.**

THE INSPECTION (con't)

- **Very <u>thorough</u> and all encompassing compared to other material inspections.**
- **What can you do?**
  - **Minimize deficiencies for which S/F is responsible.**
  - **Identify reliability, maintainability and design issues which affect mission performance negatively (CO letter of Concerns).**

TYPICAL MATERIAL INSPECTION

- DAY 1:
  - Board In-Brief
  - Pre-underway safety checks and material assessment

TYPICAL MATERIAL INSPECTION

- DAY 2:
  - Underway for operational de

TYPICAL MATERIAL INSPECTION

- DAY 3:
  - Open and inspect selected equipment,

TYPICAL MATERIAL INSPECTION

- DAY 4:
  - Individual inspectors review all deficiencies with Senior Inspector
  - Individual inspectors brief ship’s counterpart
- DAY 5:
  - Formal Out-Brief (ISIC attendance)
  - Ship Sends Quicklook Message

PREPARATIO N

- Distribute/digest INSURV package.
  - Note INSURVINST 4730.1B (Procedural Guide)
- Talk to your Board counterparts/ask questions.
- Rehearse orchestration, but not necessary to do every demo.
- Visit ships undergoing an INSURV inspection.
- Know and document ship's material condition.
- Inspect all your spaces.
- Ensure that all INSURV information is disseminated to all hands.

PREPARATION (con't)

- **KNOW YOUR EQUIPMENT**
  - **HOW IS IT <u>SUPPOSED</u> TO WORK?**
  - **DOES IT MEET SPECS? (PMS, TECH, MANUAL)**

HELPFUL HINTS

- **UNDERWAY RESTRICTIVES**
  - **MIN. EQUIPMENT REQUIRED: PRIORITY 1**
  - **FULL POWER EQUIPMENT: PRIORITY 2**
- **DAVIT WEIGHT TESTS FOR BOATS (PRE-U/W BOAT OPTEST)**
- **STEERING CHECKS**
- **CHT SYSTEM… <u>EVERY</u> COMPONENT**
- **AFFF TESTS… ACTIVATE FLIGHT/HANGER DECKS/BILGES**
- **CMWD TEST**
- **WTDs AND HATCHES**

HELPFUL HINTS (con't)

- **UNDERWAY DAY - BE FLEXIBLE… USE 1MC.**
  - **BIG TICKETS: BOILER FLEXS/FULL POWER/ DTES & DEMOS/ STEERING CHECKS/ANCHOR DROPS/CMWD/STREAM NIXIE AND/OR TAIL.**
  - **<u>SHIP</u> ARRANGES SERVICES/DO THINGS IN PARALLEL VICE SERIES/LET US HELP WITH SOE.**
- **COMBAT SYSTEMS DEMONSTRATION TEST PLAN (CSDTP)**
  - **ENSURE TESTING IS DONE EXACTLY AS REQUIRED**
- **EP-ENVIRONMENTAL AFLOAT CHECKLIST, OPNAV INST 5090.19 (SERIES) IS USED FOR OVERSIGHT PROCESS.**

HELPFUL HINTS (con't)

- **ADEQUATE VENTILATION IN FLAMMABLE STOREROOMS.**
- **OSH - INDUSTRIAL HYGIENE BASELINE SURVEY AND OPNAVINST 5100.19 (SERIES) CHECKLIST USED TO EVALUATE OSH PROGRAM COMPLIANCE.**
- **<u>EVERY</u> FANROOM INSPECTED**
- **NO PAINTING - 72 HOURS PRIOR TO INSPECTION**
- **USE <u>FIRST TEAM</u> FOR DEMOS... NOT TIME TO TRAIN NEW HANDS.**

HELPFUL HINTS (con't)

- **UNLOCK SPACES/LOCKERS/TOOL BOXES**
- **CORRECT DEFICIENCIES AS ABLE. BE PROACTIVE. IF A MISSION AREA OR ROC DEFICIENCY IS CORRECTED BEFORE IT IS REQUIRED FOR DEMONSTRATION IT WILL BE NOTED AS A SIGNIFICANT PRE-U/W DEFICIENCY RATHER THAN AS A MISSION OR ROC DEGRADE.**
- **BE PREPARED FOR WORKLOAD IN 'MESSES'**
  - **ONBOARD TEAM AND OFF SHIP SUPPORT**

KEYS TO MATERIAL READINESS

- HIGH STANDARDS --
  "GOOD ENOUGH" = MEDIOCRITY
- SHIPWIDE OWNERSHIP/TEAMWORK
- STEADY STRAIN
- PMS ACCOMPLISHMENT
- CSMP QUALITY
- WATCH STATION TRAINING

KEYS TO MATERIAL READINESS

- TRAINED AND ADEQUATELY SUPERVISED DCPOs
- ENGAGED PORT ENGINEERS
- **COMMAND ATTENTION/INVOLVEMENT**

“ZONE INSPECTIONS”

GOOD INDICATORS

- **ADEQUATE DOCUMENTATION OF DEFICIENCIES**
  - **CSMP**
  - **CO'S LETTER OF CONCERNS**
  - **PREVIOUS INSURV REPORT (ANNOTATED)**
- **EFFECTIVE PMS AND ZONE INSP**
- **MINIMUM HAZMAT/FLAMMABLES**
- **FIRST-RATE SANITATION**
- **ABSENCE OF <u>OLD</u> DIRT**
- **SMOOTH EXECUTION U/W DAY**

HULL DEPARTMENT

- DAMAGE CONTROL
- DECK
- SUPPLY/HABITABILITY

HULL AREAS OF CONCERN

- **DC**

–MAIN AND SECONDARY DRAINAGE

–REMOTE OPERATORS

–WATER TIGHT DOORS/HATCHES/SCUTTLES

–AFFF

–HALON

–CMWD SYSTEMS

–EXPLOSION PROOF LIGHTS

–CAPDS/IPDS

–APC

HULL AREAS OF CONCERN

- **DECK**

–WEIGHT TEST MEMOS

–DAVIT LIMIT SWITCHES

–WIRE ROPE

–SLIDING PADEYES

–BOATS

–INVENTORIES

- REPLENISHMENT
- MOORING TO A BUOY
- TOWING

–LIGHTING

–LIFE PRESERVERS

HULL AREAS OF CONCERN

- **SUPPLY/HAB**

–GALLEY EQUIPMENT PMS CHECKS

–GAYLORD HOODS

- LOW FLOW
- INOP CLEANING SYSTEMS

–LAUNDRY EQUIPMENT PMS CHECKS

–BERTHING FURNISHINGS

–SANITARY SPACE VENTILATION

INSURV Preparations

for

Combat Systems

Scope of Preparations

- **Inport Material Checks**
  - Governed by the Combat Systems Demonstration Test Package (CSDTP)
  - CSDTP is our minimum scope of checks
  - PMS, CSOSS, Tech Manual, SOT/BITs
- **Evaluated by**
  - FTSC Reps, INSURV uniformed officers, other technical agents (SPAWAR, etc.)
  - Roughly 70 percent done by Tech Reps

Scope of Preparations

- **Underway Day**
  - Communications Checks, ISNS Checks
  - Steering (Pilothouse Command & Control)
  - Demonstrations
    - AAW, ASW (including NIXIE)
- **Executed IAW**
  - INSURV Instructions
- **Services Arranged By the Ship**

What Are the Hardspots?

- **PMS**
  - Simply not being conducted or personnel unfamiliar with the maintenance procedure or equipment
  - Incorrect results not recognized
  - Material deficiencies not reported
  - Insufficient oversight (Spot Checks, etc): QA
- **Only One Standard for Performance**
  - No matter who said “It’s Good to Go…”
  - All equipment MUST STRICTLY SATISFY the written requirements: EOP/CSOSS/PMS/ Tech Manuals/Approved DFS

What Are the Hardspots?

- **Technical Documentation**
  - PMS, CSOSS/EOSS, Technical Manuals, etc. have not been revised subsequent to alteration or revision, or are not held onboard
  - Maintenance personnel utilizing “word of mouth” as far as performance standards or PMS results
  - PMS is worded vaguely or without sufficient clarity
    - General Inspection criteria….but what should be done if any of the criteria are found? What requires Repair Before Operate? ANY discrepancy must be fully resolved/corrected prior to INSURV operations.

Opinions….

- Those ships without active CO/XO/ Dept Head spot check programs are sometimes found to have systemic PMS failure or gun deck problems
- Some critical systems have only one petty officer who really understands or maintains them
- There is, generally speaking, an inadequate level of Attention to Detail with respect to assessing material condition or operability

Opinions….

- Personnel need to pursue the complete answer -
  - Technical Hierarchy
    - EOSS/CSOSS
    - PMS
    - NSTM/NavShips Manuals
    - Technical Manuals
    - OEM Guidance
- If the answer is not above, then the ISEA and/or Life Cycle Manager should be contacted.

Aviation (AV)

INSURV - Aviation

- Ensure Trained Personnel Present
- Ensure Systems meet a Cert Standard
- Document (CSMP) Known Deficiencies
- Specifics:
  - Aviation Spaces are Aviation Spaces
  - Calibrated Equipment must be in periodicity
  - Use your Av Det to ID Deficiencies

ENGINEERING

Administration

- PMS
  - Personnel not familiar, particularly with situational requirements.
  - Situational requirements are not being scheduled.
  - Accomplishment.
  - Problems are not reported to supervisors.

Administration

- CSMP
  - Does not reflect current material condition.
  - Jobs are poorly written/hard to understand.
  - CSMP is updated just prior to inspection.
  - Lacks meaningful review.

Communications/Supervision

- Many ships do not communicate with the board beyond the formal brief.
- During the inspections, leadership personnel are not actively involved.
- Depth of knowledge is often very shallow. WCS frequently performs majority of checks while subordinates are idle or unsupervised.

Hot and Cold Checks

- Rehearse checks before inspection.
- Be prepared to conduct checks upon the board’s arrival.
- Ship’s force drives the inspection; vice inspectors driving.
- Conduct checks in parallel, when possible.

Gauge Calibration

- Many not familiar with program.
- Instruments are identified as NCR though used for critical application (PMS, primary point of monitoring, etc).
- Ship-wide problem.

Shore Power

- PMS and EOSS are not strictly followed.
  - Conceals problems - with equipment and procedures.
- Supervisors/maintenance personnel are often unfamiliar with the procedures and the system.
  - Improper isolation - prevents proper performance of procedures.

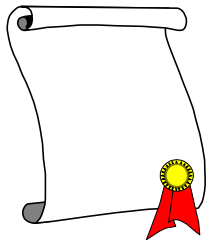
Steering

- Personnel are not familiar with entire MIP/MRC.
- Unfamiliar with blocking valve test.
  - NSTM procedure vice PMS.
- Rudder splits.
  - Not recognized.
  - Not corrected.

CONTACTING COUNTERPARTS

- INSURVLANT/TRIALS
  - lastname@insurv.nosc.mil
  - PHONE: (757) 462-7881 (DSN 253)
  - FAX: (757) 462-7765
- INSURVPAC
  - lastname@insurvpac.nosc.mil
  - PHONE: (619) 556-3482 (DSN 526)
  - FAX: (619) 556-5566
- WEB SITE
  - www.spawar.navy.mil/fleet/insurv

INSPECTION PRODUCTS



SUMMARY REPORTS

LEADERSHIP BRIEFINGS

CNO

SYSTEMS COMMANDS

SECNAV

FLEET & TYPE COMMANDERS

PROGRAM MGRS

INSURV

DATA COMPILATION & ANALYSIS

INSPECTION RESULTS

IMPROVEMENTS

INSPECTION PRODUCTS

CNO

SYSTEMS COMMANDS

SECNAV

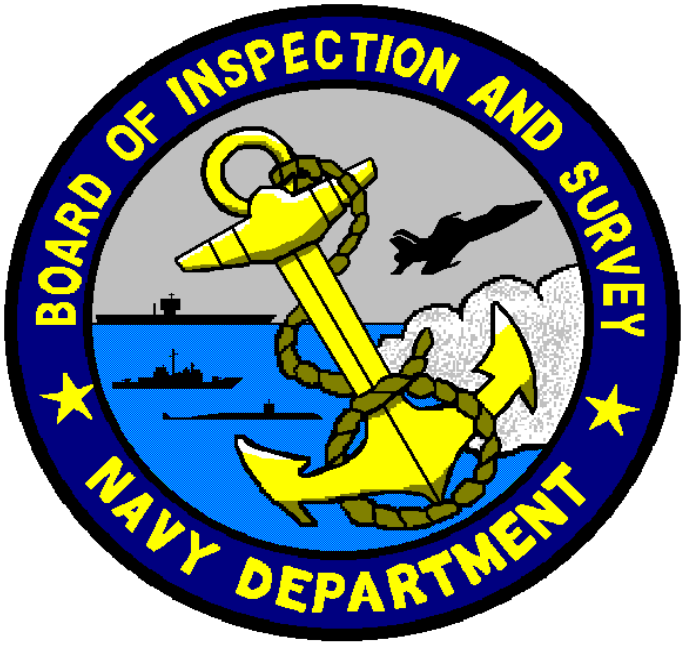
FLEET & TYPE COMMANDERS

PROGRAM MGRS

IMPROVEMENTS

NEW CONSTRUCTION IMPROVEMENTS & SHIP ALTERATIONS

BETTER MAINTENANCE PACKAGES & STRATEGIES



INTEGRAL TO MAINTAINING WORLD'S BEST NAVY

√ SUPPORTS NEW CONSTRUCTION THROUGH INACTIVATION

√ PROVIDES INDEPENDENT ASSESSMENT

√ STIMULATES IMPROVEMENTS TO FLEET MATERIAL CONDITION